

Cow Efficiency

Is it related to retail product value?

If you are expecting an article steeped in research data and doctoral facts, this isn't it. Rather this is strictly from an industry perspective with the goals of stimulating thinking about how you define cow efficiency and what is the demand for producing a high quality, valuable end product. This is not to say that research around these topics is not important or not needed, that is not the intent of this article.

While I will try to provoke a discussion through asking questions, much of these thoughts in this article are to challenge the balance of maximum production versus final value creation and at the end of the day, there is no perfect answer. As I fully realize that each of us is challenged to balance production traits and traits which create demand or quality traits while maximizing profitability.

Since the beef industry is so segmented, the communication between segments gets blurred with noise that many times makes it difficult to put all of the pieces of the puzzle together, where is value created and at what cost to which segment. This is not always a very clear picture for all segments, however we each are going to have to find ways to break down these barriers and work together toward increasing demand.

Many things come to mind when we in industry talk about cow efficiency...for this article, we will define cow efficiency as the volume and cost of inputs which are required to sustain the expected or identified production traits at the cow herd level.

Of course depending on the region of the country where your operation is located, these inputs and cost will greatly vary. None the less, what we are talking about in this particular article is the relationship of cow efficiency in a production system and the connection to the key retail value drivers. Again, for this article we are defining retail drivers as the traits which are valued by the end users; consumers, chefs, and further processors. I full realize that for a seed stock breeder, it might be easy to make the argument that your "Key Retail Drivers" are those traits your commercial cow/calf customer is looking for or needing...that is a valid point, but is also somewhat one dimensional. Even though it has been argued that the trickledown effect of understanding the end user needs and demands are contradictory to production needs and demands, there is and can be a balance.

There is strong evidence that cow efficiency is, as we have defined it, directly related to the size and scale of the cow. There then becomes more

pressure and concern when working to produce for those "Key Retail Drivers" we have identified. For example, if we take the rule of thumb that a finished steer weight will generally be 150 pounds heavier than the cow; using this general but relatively accurate rule a 1150 lb cow will then normally produce a steer that when finished will weigh around 1300 pounds. Of course there are obvious factors which can and do change this equation one way or the other (smaller or larger) such as: the bull used, genetic capability, management techniques, growth promotions, and days on feed to name a few. None the less it is a relatively accurate gage for size of finished steer.

To put this into perspective, the table below might be a clearer illustration for this discussion.

The conclusion could be made that to produce the highest retail product value, while working to produce the maximum pounds of saleable live animal weight...the 1350 pound cow is the ideal. Not so fast...it has been proven that a large framed cow costs more to maintain, takes more acres per cow and the average weight of the steer calf is then 1500 pounds. Most cattle feeders, feedlot managers and cattle buyers will agree that the average calf crop will vary in weight at finish from 50 - 200 pounds either way of the average. If we were to use a 100 pound spread as our average as an indicator of what the most overall ideal cow size would be...then we would select a cow between 1100 and 1200 pounds for the most part.

The last and final rule of thumb I will share is this, for every 1 pound of carcass weight we produce; it is the same as adding 1000 head of live cattle available supply. Current feeder and live cattle prices would suggest that with the 14 pound increase in carcass weight from last to this year, there is relative need to understand and control cow size, genetic capabili-

Standard Cow Efficiency Traits

- Fleshing Ability
- Milking Ability
- Maintenance Costs
- Percent Calf Crop
- Calving Interval
- Pounds of Weaned Calf
- Longevity
- Others you may identify

Key Retail Value Drivers

- Percent Prime
- Percent Choice & Premium Choice
- Percent YG 1,2,3's
- Rib Eye Area
- Muscle Size / Carcass Weight
- Acceptable Tenderness
- Ability of Carcass to become more tender, flavorful and maintain juiciness throughout the aging process.

Mature Cow Weight	Finished Steer Live Weight	Dressing Percent (Live Wt. x DP)	Calculated Carcass Weight	Approximate REA for Carcass Wt Based off USDA Scale	Carcass Weight Scale	Required REA for Carcass Wt by USDA	Desired REA Size For Maxium Retail Value
1100	1250	64.5	806	13.4	600	11.0	10.5 - 15.0
1150	1300	64.5	838	13.8	650	11.8	10.5 - 15.0
1175	1325	64.5	854	14	700	12.2	10.5 - 15.0
1200	1350	64.5	870	14.2	750	12.8	10.5 - 15.0
1225	1375	64.5	886	14.5	800	13.4	10.5 - 15.0
1250	1400	64.5	903	14.6	825	13.7	10.5 - 15.0
1275	1425	64.5	919	14.9	850	14.0	10.5 - 15.0
1300	1450	64.5	935	15.1	875	14.3	10.5 - 15.0
1325	1475	64.5	951	15.5	900	14.6	10.5 - 15.0
1350	1500	64.5	967	15.7	925	14.9	10.5 - 15.0
1375	1525	64.5	983	15.9	950	15.5	10.5 - 15.0

COW EFFICIENCY. IS IT RELATED TO RETAIL PRODUCT VALUE?

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Efficiency Traits versus Retail Value Traits

- Cow size vs Rib Eye Area
- Cow size vs Marbling Ability
- Cow size vs Yield Grade
- Cow size vs Tenderness
- Cow size vs Feed Efficiency
- Cow size vs Feed Conversion

We can insert breed, genetic ability, mature weight, and other traits instead of size and have the same debate or discussion.

ties, and most of all to share information which will allow each segment to better manage and plan for the diversity in the production pipeline.

As we work to create efficient production, maximize weight, and gain in profitability, we too must consider the nagging end user issues, and challenges like, plate coverage from steaks too big around, food cost to menu price, and availability of what they need seasonally, if we are committed to continue to improve beef demand....more beef sold at higher prices ■

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